

Applicants : James L. Overbeck et al
Serial No. : 09/733,162
Page No. : 4

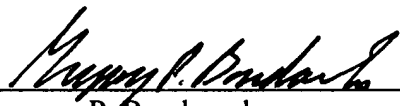
REMARKS

Claims 66, 69-76, 80-84 and 86-87 remain in this application. The examiner is respectfully requested to consider this Preliminary Amendment when examining this application.

Respectfully submitted,

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APPENDIX A

MARKED-UP VERSION OF AMENDED CLAIM

66. (Amended) A shield for a device for measuring optical characteristics of an object in a field of view, the device having an illumination source comprising:

a body [~~including a first end and a second end distal from said first end, said first end~~] defining an aperture[, ~~said body establishing a predetermined distance between the illumination source and the object when said aperture is placed in a position chosen from the object and adjacent object~~] through which the object is measured;

means for engaging said [~~second end~~] body against the measuring device whereby ambient light is restricted from entering said body [~~portion~~]; and

a reference [~~color disposed~~] area secured to the body and proximate said [~~first end~~] aperture, said reference area in the field of view and adapted to establish an illumination reference in the field of view.

69. (Amended) The shield of claim [68] 66 including means to [~~indicates~~] indicate at least one chosen from the origin of the shield, lot number of the shield, expiration date of the shield and patient information, said indicating means disposed proximate said aperture [~~whereby said indicating means are included in any measurement collected by the color measuring device~~] and in said field of view.

74. (Amended) A shield for a color measuring device used in dental applications comprising:

a body defining a cavity and including first and second end [~~in illuminatory communication with one another~~], said first end separated from said second end a pre-selected distance;

a first aperture defined by said first end, said aperture for disposing in a position chosen from against and adjacent an object to be color measured;

a second aperture defined by said second end for disposing proximate an illumination source; and

a reference ~~[color]~~ area associated with said body proximate said first aperture ~~[whereby said reference color is measured by the color-measuring device during color measurements]~~ adapted to establish an illumination compensation factor.

75. (Amended) The shield of claim 74 wherein the shield is ~~[used]~~ adapted to prevent contamination from passing from a first patient to subsequent patients.

80. (Amended) A shield for a device used to measure the color of dental objects within a field of view comprising:

a ~~[member]~~ body defining a cavity through which illumination ~~[may pass]~~ passes, said ~~[member]~~ body of a predetermined length ~~[to establish a selected distance between a measured dental object and a source of illumination];~~ and

~~[a]~~ an illumination reference ~~[color]~~ area associated with said member in the field of view.

84. (Amended) The shield of claim 83 ~~[wherein the reference color is used to establish a compensation factor when the color-measuring device measures color]~~ comprising indicia means for providing information captured in the field of view.

86. (Amended) An instrument for acquiring a color image of a tooth within a field of view, said instrument comprising:

a ~~[handheld]~~ housing;

an illumination source within said housing for illuminating the field of view;

an image sensing device within said housing for sensing an image of the tooth; and

a disposable shield including a first end removably connected to said housing and a second end defining an aperture within the field of view, the shield providing a desired spacing between the tooth and the image sensing device when the second end is placed against a portion of a patient's mouth, ~~[at least a portion of the second end also being]~~ said second end including a reference area that establishes a compensation factor for illumination within the field of view~~[, said portion being of a desired uniform color so that said portion provides a reference color within the field of view to said image sensing device].~~

87. (Amended) ~~[An]~~ The instrument ~~[as defined in]~~ of claim 86 wherein said first end provides a light-tight seal against said housing.

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